WHAT IS CLAIMED IS:

1. A field emission display, comprising:

a cathode plate having row/column signal lines of a belt shape for which row/column addressing is possible on a substrate, and pixels each defined by the row signal line and the column signal line, wherein each pixel has a film-shape field emitter and a control device for controlling the field emitter, having at least two terminals connected to the row/column signal lines and one terminal connected to the film-shape field emitter;

an anode plate having a transparent electrode on a substrate and a phosphor on a portion of the transparent electrode, in each pixel;

a gate plate having gate holes and a gate electrode around the top of the gate holes, said gate holes having an inclined inner wall; and

spacers for supporting the gate plate between the cathode plate and the anode plate,

wherein the field emitter of the cathode plate is constructed to be opposite to the phosphor of the anode plate through the gate holes, and is formed by vacuum packaging.

2. The field emission display as claimed in claim 1, wherein the anode plate, the cathode plate and the gate plate are formed of different transparent insulating substrates, respectively.

3. The field emission display as claimed in claim 1, wherein the spacers are formed between the anode plate and the gate plate.

4. The field emission display as claimed in claim 1, further comprising a black matrix at a given region between the phosphors of the anode.

5. The field emission display as claimed in claim 4, wherein the image is represented by gray scale, by changing a pulse amplitude and/or pulse width (duration) of the data signal voltage applied to the field emitter through controlling of the control device.

6. The field emission display as claimed in claim 1, wherein the field emitter is composed of a thin film or a thick film comprising a diamond, a diamond carbon, or a carbon nanotube.

7. The field emission display as claimed in claim 1, wherein the control device is a thin film transistor or a metal-oxide-semiconductor field effect transistor.

8. The field emission display as claimed in claim 1, wherein a DC voltage is applied to the gate electrode to induce an electron emission from the film-shaped field emitter in the cathode plate;

the emitted electrons are accelerated with high energy by applying a DC voltage to the transparent electrode of the anode plate; and

scan and data signals are addressed to the control device of the field emitter in each pixel of the cathode plate, whereby the control device of the

field emitter controls the electron emission of the field emitter to represent images.

9. A field emission display, comprising:

a cathode plate having row/column signal lines of a belt shape for which row/column addressing is possible on a substrate, and pixels each defined by the row signal line and the column signal line, wherein each pixel has a film-shape field emitter and a control device for controlling the field emitter, having at least two terminals connected to the row/column signal lines and one terminal connected to the film-shape field emitter;

an anode plate having a transparent electrode on a substrate and a phosphor on a portion of the transparent electrode, in each pixel;

a gate plate having gate holes and a gate electrode around the top of the gate holes, said gate holes each having an inclined inner wall; and

spacers for supporting the gate plate between the cathode plate and the anode plate,

wherein, the field emitter is composed of dots divided into a plurality of regions, the gate hole of the gate plate has the number corresponding to each of the dots, and at least one of the gate holes has an inclined inner wall.

10. The field emission display as claimed in claim 9, wherein the anode plate, the cathode plate and the gate plate are formed of different transparent insulating substrates, respectively.

11. The field emission display as claimed in claim 9, wherein the spacers are formed between the anode plate and the gate plate.

12. The field emission display as claimed in claim 9, further comprising a black matrix at a given region between the phosphors of the anode.

13. The field emission display as claimed in claim 12, wherein the image is represented by gray scale, by changing a pulse amplitude and/or pulse width (duration) of the data signal voltage applied to the field emitter through controlling of the control device.

14. The field emission display as claimed in claim 9, wherein the field emitter is composed of a thin film or a thick film comprising a diamond, a diamond carbon, or a carbon nanotube.

15. The field emission display as claimed in claim 9, wherein the control device is a thin film transistor or a metal-oxide-semiconductor field effect transistor.

16. The field emission display as claimed in claim 9, wherein a DC voltage is applied to the gate electrode to induce an electron emission from the film-shaped field emitter in the cathode plate;

the emitted electrons are accelerated with high energy by applying a DC voltage to the transparent electrode of the anode plate; and

scan and data signals are addressed to the control device of the field emitter in each pixel of the cathode plate, whereby the control device of the field emitter controls the electron emission of the field emitter to represent images.

17. A field emission display, comprising:

a cathode plate having row/column signal lines of a belt shape for which row/column addressing is possible on a substrate, and pixels each defined by the row signal line and the column signal line, wherein each pixel has a film-shape field emitter and a control device for controlling the field emitter, having at least two terminals connected to the row/column signal lines and one terminal connected to the film-shape field emitter;

an anode plate having a transparent electrode on a substrate and a phosphor on a portion of the transparent electrode, in each pixel; and

spacers for supporting the cathode plate and the anode plate, while keeping isolation therebetween by a predetermined distance,

wherein an insulating layer including gate holes and a gate electrode around the top of the gate holes is further comprised on an upper portion of the cathode plate, in each pixel, said gate holes each having an inclined inner wall, and

the field emitter of the cathode plate is constructed to opposite to the phosphor of the anode plate through the gate hole, and vacuum packaged.

18. The field emission display as claimed in claim 17, wherein the anode plate and the cathode plate are formed of different transparent insulating substrates, respectively.

19. The field emission display as claimed in claim 17, further comprising a black matrix at a given region between the phosphors of the anode.

20. The field emission display as claimed in claim 19, wherein the image is represented by gray scale, by changing a pulse amplitude and/or pulse width (duration) of the data signal voltage applied to the field emitter through controlling of the control device.

21. The field emission display as claimed in claim 17, wherein the field emitter is composed of a thin film or a thick film comprising a diamond, a diamond carbon, or a carbon nanotube.

22. The field emission display as claimed in claim 17, wherein the control device is a thin film transistor or a metal-oxide-semiconductor field effect transistor.

23. The field emission display as claimed in claim 17, wherein a DC voltage is applied to the gate electrode to induce an electron emission from the film-shaped field emitter in the cathode plate;

the emitted electrons are accelerated with high energy by applying a DC voltage to the transparent electrode of the anode plate; and

scan and data signals are addressed to the control device of the field emitter in each pixel of the cathode plate, whereby the control device of the field emitter controls the electron emission of the field emitter to represent images.

24. A field emission display, comprising:

a cathode plate having row/column signal lines of a belt shape for which row/column addressing is possible on a substrate, and pixels each defined by the row signal line and the column signal line, wherein each pixel has a film-shape field emitter and a control device for controlling the field emitter, having at least two terminals connected to the row/column signal lines and one terminal connected to the film-shape field emitter;

an anode plate having a transparent electrode on a substrate and a phosphor on a portion of the transparent electrode, in each pixel; and

spacers for supporting the cathode plate and the anode plate, while keeping isolation therebetween by a predetermined distance,

wherein an insulating layer including gate holes and a gate electrode around the top of the gate holes is further comprised on an upper portion of the cathode plate, in each pixel, said gate holes each having an inclined inner wall,

the field emitter of the cathode plate is constructed to opposite to the phosphor of the anode plate through the gate hole, and vacuum packaged, and

the field emitter is composed of dots divided into a plurality of regions, the gate hole of the gate plate has the number corresponding to each of the dots, and at least one of the gate holes has an inclined inner wall.

25. The field emission display as claimed in claim 24, wherein the anode plate and the cathode plate are formed of different transparent insulating substrates, respectively.

26. The field emission display as claimed in claim 24, further comprising a black matrix at a given region between the phosphors of the anode.

27. The field emission display as claimed in claim 26, wherein the image is represented by gray scale, by changing a pulse amplitude and/or pulse width (duration) of the data signal voltage applied to the field emitter through controlling of the control device.

28. The field emission display as claimed in claim 24, wherein the field emitter is composed of a thin film or a thick film comprising a diamond, a diamond carbon, or a carbon nanotube.

29. The field emission display as claimed in claim 24, wherein the control device is a thin film transistor or a metal-oxide-semiconductor field effect transistor.

30. The field emission display as claimed in claim 24, wherein a DC voltage is applied to the gate electrode to induce an electron emission from the film-shaped field emitter in the cathode plate;

the emitted electrons are accelerated with high energy by applying a DC voltage to the transparent electrode of the anode plate; and

scan and data signals are addressed to the control device of the field emitter in each pixel of the cathode plate, whereby the control device of the field emitter controls the electron emission of the field emitter to represent images.